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MICRO-INVESTMENT DECISIONS**

**Glòria Estapé Dubreuil, Arvind Ashta, Jean-Pierre Hédou**

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# Studying the micro-angels approach to micro-investment decisions

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## **Structured Abstract:**

**Purpose:** The paper analyzes the micro-angels investment behaviour, looking both to the criteria used in the selection of their investment projects and to the characteristics of their guidance role during the investment period.

**Design/Methodology/Approach:** The paper focuses on a double bottom line movement of French micro-angels clubs that has been operating since 1983. Our primary source of data is an online survey carried out during March 2012, asking members of clubs all over France for different aspects of their procedures.

**Findings:** Our findings suggest that micro-angels are interested in small, socially or environmentally friendly projects having the potential to contribute to the development of their neighbourhood. We find that women are even more interested than men in such projects. Educated micro-angels value entrepreneurial motivation and understanding of the project more than less-educated micro-angels. We also point out the factors that micro-angels consider important in accompanying enterprises. Here we find that gender makes little difference. However, retired micro-angels value financial diagnosis made conjointly with entrepreneurs, while both active micro-angels and educated micro-angels value more the use of their network to help micro-entrepreneurs.

**Practical/Social Implications:** Given the potential benefits of micro-angels investing and guiding the development of micro-enterprises, a social micro-angel investment on a major scale in developing countries could help in tackling some of the problems faced by the development of microfinance, such as the over-indebtedness of micro-entrepreneurs. Practitioners and new initiatives would gain from understanding what adaptations need to be made.

**Originality/value:** We expect to add to the venture capital theory to take into account non-economic motives.

**Keywords:** microfinance, micro-angels, micro-equity, business angels, social entrepreneurship, private equity.

**Article Classification:** Research Paper

## 1. Introduction

This paper analyzes the provision of financial services in an unusual way which is both related to microfinance and social entrepreneurship. It focuses on the practices of a movement of local business angels investing small amounts to help people start their own business and move out of poverty. The movement is grouped around a number of clubs of investment in France, having common principles and sharing their identity through a common affiliation: the *Clubs d'Investisseurs pour une Gestion Alternative et Locale de l'Epargne Solidaire* (CIGALES) or Investors Club for an Alternative and Local Management of Solidarity Savings.

Like social entrepreneurship, the CIGALES clubs' investments aim to bring about positive social change, using business practices and market principles. They can be considered social investors, since they invest in social enterprises and they expect to get both financial and social returns from the firms they are investing in.

The clubs can be easily related to microfinance also, since both CIGALES clubs and Microfinance Institutions have similar social missions, focussed on the provision of financial services to the financially excluded. The amazing growth of microfinance, initiated with the proliferation of the microcredit concept in the 1980s and followed by many other financial services, including micro-savings and micro-insurance, has not included, up to now, micro-equity, with rare exception such as this one. The omission is curious, given the potential benefits of micro-angels investing and guiding the development of micro-enterprises. A micro-angel investment on a major scale in developing countries could also help in tackling some of the problems faced by the development of microfinance, such as the over-indebtedness of micro-entrepreneurs. If the success of microcredit in alleviating poverty is debated (Roodman and Morduch, 2009) and the success of microenterprise is not evident, perhaps microenterprise needs the handholding role of micro-angels along with the downside risk protection afforded by micro-equity.

Theoretically, Venture Capital (VC) and business angels make money by examining business plans, selecting the feasible ventures with some chance for rapid scaling, guiding the entrepreneur to achieve this scale and exiting. This paper looks at how the CIGALES investment clubs use modified versions of the VC and business angel theory in the presence of a double bottom line. It focuses on the analysis of their methods of selecting projects, and in the monitoring, accompanying and coaching roles of the micro-angels in France. We think that the results of such research could be of interest to any future development of similar movements in other parts of the world, especially developing countries.

To proceed, section 2 contains a brief literature review concerning venture capital and business angels' selection and monitoring procedures. Section 3 presents our research objectives and methodology. Section 4 overviews the main results obtained which are discussed in section 5.

## 2. Literature review

According to the literature, business angels are private (wealthy) individuals who invest their money and experience in entrepreneurial ventures with which they have no family connection (Mason and Harrison, 1995). The finance they provide is referred to as "informal venture capital" because, similar

to formal venture capital firms, business angels typically invest money in return for an equity stake in the company (Wiltbank, 2005). Usually, business angels invest in earlier stages than venture capital do, often offering finance before the firm starts selling and providing lower investments individually than venture capital (Hindle and Wenban, 1999; Wong *et al.*, 2009; Sohl, 1999; Colombo and Grilli, 2009).

Their selection process includes deal origination (referrals, acquaintances, receiving cold calls, active search), deal screening (minimum size of investment, familiar industry, technology, geographical access stage of financing), deal evaluation and due diligence (Tyebjee and Bruno, 1984; Cumming, 2006; Hindle and Wenban, 1999; Feeney *et al.*, 1999). All this is done in order to select appropriate firms targeting appropriate niches because often business angels (Wong *et al.*, 2009) specialize in an industry and select firms in industries, technologies or products where they have experience.

The presentation of a business plan, as well as interviews with the prospective entrepreneurs, are invariably required, to see both that the industry has opportunity and that the management has the ability to convert that opportunity to high returns (Feeney *et al.*, 1999). The literature has revealed a wide variety of possible criteria used by business angels when evaluating opportunities. A first layer of criteria consist of financial numbers, such as expected rate of return; capital growth; cash flow; time to exit; and tax benefits (Hindle and Wenban, 1999), and other easily verifiable factors such as sales, evidence of marketplace acceptance and size, as well as patent protection (Mason and Stark, 2004). Objective human capital factors are also important, including skills, experience, track record, and characteristics of entrepreneurs and their management team (Haines *et al.*, 2003; Mason and Stark, 2004). In addition to these relatively objective factors, Feeney *et al.* (1999) identify more subjective personality characteristics including openness, honesty, realism and integrity, and show also that many non-financial factors have a major role to play in rejecting deals such as doubts of management capability. Indeed, some authors suggest that business angels look first for one or more reasons to reject an opportunity, thus trimming the set of investment opportunities, instead of using a compensatory model (where high levels of one attribute can compensate for lower levels in another one), due to the time/ cost associated with gathering data on all attributes (Maxwell *et al.*, 2011).

The literature has identified potential benefits to be gained from venture capitals and business angels. From the investees' point of view, business angels not only help to overcome funding difficulties, but also use their human capital to provide skills and expertise, as well as networking contacts, to guide and develop the firm, and thus ultimately increase opportunities to acquire further funding (Macht and Robinson, 2009). However, since they are using a high-risk high-return approach, venture capitalists need contracts containing downside protection (such as anti-dilution clauses) and upside opportunities (Zider, 1998). They also need to have governance rights, contractual clauses and specific financial instruments to protect them from expropriation by the founders (Colombo and Grilli, 2009; Wong *et al.*, 2009).

Business angels, who are more risk prone as they come in earlier in the investment stage, often ignore such safeguards and substitute them by proximity and sharing risk with other business angels (Wong *et al.*, 2009) as well as stronger commitment signals such as the proportion of equity kept by the founder or the percentage of founder's wealth invested in the enterprise (Conti *et al.*, 2010; Prasad *et*

*al.*, 2000) . For example, business angels take a lower percentage of equity and often do not take a seat in the board of directors (Wong *et al.*, 2009).

In addition to financing, business angels also help develop managers by actively participating in functions such as accounting and governance (Wong *et al.*, 2009). The guidance role of business angels includes coaching as well as providing access to their networks (Barber and Goold, 2007; Colombo and Grilli, 2009; Ramadani, 2009). Some literature also suggests that experienced business angels may play a key role as facilitators for further finance, especially when the entrepreneurial team does not have previous experience (Sørheim, 2005).

### **3. Research objectives and methodology**

The paper focuses on the analysis of the micro-angels methods of selecting projects and in their monitoring, accompanying and coaching roles. Since it is done in a particular movement of investment clubs in France, our research has to be contextualized, providing some general background on these clubs.

CIGALES or Investors Club for an Alternative and Local Management of Solidarity Savings is the acronym for the French *Club d'Investisseurs pour une Gestion Alternative et Locale de l'Epargne Solidaire*. Each club, independently managed by their members, is constituted for five years, renewable for another five. All clubs share some common principles, and have agreed to assemble in a National Federation, as well as in regional associations (in some regions with enough clubs).

According to Taupin and Glemain (2007), the constitution of the CIGALES movement in 1983 is one of the first steps in the creation of the modern structures of solidarity finance and perhaps in the first solidarity savings products. Data for 2010 indicates the existence of 136 clubs in activity, assembling a gross total of nearly 1,800 members [1]. The development of this movement as well as the bottlenecks which limited it have been researched through in depth interviews by Ashta *et al.* (2012).

Typically, a CIGALES club has 13 members, the mean of a range between 5 and 20. During the first five years, the club members put together some microsavings (commonly 30 to 50 Euros monthly [2]) to constitute a fund for investment in microenterprises. Usually, their investments will be on average 3,000 Euros per enterprise [3], although more than one club of the same region can invest in the same enterprise if considered worthy. A total of 5 to 10 investments per club during their active life is therefore expected. Investments should be kept for five years in order to get tax benefits. For that reason, usually the club is renewed for five more years, where the members would only manage their existing investments, without bringing in more savings. The club will be dissolved after the exit of their last investment.

Etapé-Dubreuil *et al* (2012 forthcoming) indicate the profile of the typical microangels is male, with a university degree, mostly working as managers or in the liberal professions who would like to get his money back and perhaps earn a 0-2% return. They also find that the projects are selected based on economic as well as social and environmental impact, as well as the appreciation of their guidance role by the target entrepreneur. However, they do not analyse the guidance role nor go further and see if the selection process or the guidance differs with different profiles of microangels.

The main objectives of this research concern the investment methodology applied by the clubs, particularly related to (a) the criteria used in the selection of their investment projects by different kinds of microangels, and (b) the basis of their guidance role during the time of the investment. In the analysis, we shall take into account the double bottom line of the CIGALES clubs, to see how it influences the different studied procedures.

### *Data collection*

Our methodological approach combines primary and secondary data of diverse sources. The websites of both the national federation and especially some the websites of the regional associations contain enough information with respect to the movement and the general procedures of the clubs. Furthermore, since one of the co-authors is actively involved in the Bourgogne territorial association of the CIGALES, we have been granted access to some private documents. This includes the technical information sheets used for the analysis of a project and the model of agreement generally used between the CIGALES club and one of its investment enterprises.

As primary data, we have used three different sources of information. The first one is a series of 15 extensive semi-structured interviews of 40 to 90 minutes each made during February 2012 with club-members in different regions of France. The main objective of these interviews was to understand the movement as a whole, but some of the answers are pertinent to this research as well.

The second source is data collected through an online survey carried out during March 2012, asking members of clubs all over France for their personal opinions concerning different aspects of their procedures. The Federation as well as some regional associations helped us collect the data. A five-point symmetric Likert scale was used to measure the degree of importance accorded by the respondent to different characteristics regarding the process of selection and accompaniment of projects. The five answers proposed for the Likert scale were: “of utmost importance”, “very important”, “quite important”, “of little importance”, “of minimum or no importance”. After eliminating duplicate items based on same IP address with the same personal profile on the first screen, the final usable sample includes the answers of 273 *cigaliers*, 85.4% (i.e. 233) having completed all relevant questions, the others skipping some of them. Taking into account the scope of our research, the sample is statistically significant with a margin of error of between 5.5% and 6% (for the worst case), considering maximum indeterminacy ( $p=q=0.5$ ) and a confidence level of 95%. Table 1 describes the sample in terms of gender, level of formal education, and profession (including earlier profession for the retired).

The third and last source of primary data used in the paper is a workshop organized during April 2012 with the authors (including therefore a member of the Burgundy CIGALES club) and microfinance researchers to discuss different aspects of the accompaniment procedures of the clubs in particular and of the movement in general. After presenting the main hypothesis of our research, as well as a summary of the results already obtained through the questionnaire, there was discussion on each of them. This permitted us to cover information and perspectives which have not already been treated by the above sources of information. The discussion was recorded and then translated to English, and independently coded by each author. The resultant information was then confronted to spot any differences, which were then resolved.



	N	%		N	%
<i>(a) Gender</i>			<i>(c) Profession</i>		
Women	99	36.26%	Salaried Employee	33	12.09%
Men	174	63.74%	Middle manager	65	23.81%
<i>(b) Level of formal education</i>			Senior Manager / liberal professional	139	50.92%
Primary school	0	--	CEO	25	9.16%
High-school	9	3.30%	Farmer	3	1.10%
Professional school	9	3.30%	Craftsperson / shopkeeper	3	1.10%
College (BAC+2)	41	15.02%	Others (without professional activity)	5	1.83%
University degree (3 years)	43	15.75%	<i>(d) Actual activity status</i>		
University degree (5 years)	151	55.31%	Working	197	72.16%
University degree (8 years)	20	7.33%	Retired	76	27.84%

*Table 1: Distribution of respondents in terms of different personal characteristics*

#### 4. Research results

In this section we report our findings on the two areas of interest to our research. We will discuss these later in the ensuing section.

##### *Selection process*

The selection process of a CIGALES club involves the presentation of a business plan by the entrepreneur, followed by a series of interviews between members of the club and the entrepreneurs. An internal document [4] advises three different items to be considered in this process: *(a)* accordance with the principles and philosophy of the CIGALES movement; *(b)* knowledge of the entrepreneur “to judge their degree of motivation, the constitution of the starting team and its understanding, its previous experience”; and *(c)* the financial analysis of the project. The final decision on a given investment is made by the assembly of all members of the club, since asset management is made collectively, under the principle of one person, one vote.

The responses of the *cigaliers* to our questionnaire provide additional insight on the criteria used by the clubs members during this process. The six aspects most highly graded by the respondents, both relative to the project itself and to the entrepreneur, are listed in table 2.

The table clearly shows the importance placed by the microangels on the social and environmental concerns related to the project. Indeed, between the six most graded, only two aspects are related to the usual business performance measures of the project, while the other four are related to its performance in terms of social and environmental impact. While economic viability is the second most important, it is also important to note that it is the only one where no one rated it as “of minimum or no importance” (hence the range starts from 2). The other economic criterion, relegated to the sixth place, is “good potential market for the product/service offered”.

The salient answers to questions concerning human capital factors are also shown in table 2. While the double bottom line of the CIGALES is also shown, it must be signalled that the main aspects considered on the entrepreneurs proposing the projects refer to relatively standard business profile.

Therefore, it can be concluded that the normal entrepreneurial profile is being sought by micro-angels. Nevertheless it has also to be pointed that social and solidarity motivations are included in the top three.

Aspects related to the Project	Range	Mean	St. Dev.	Graded 5 in
Societal and solidarity aspects	1 - 5	4.31	0.91372	54.39%
Economic viability	2 - 5	4.25	0.77361	43.93%
Environmental impact	1 - 5	3.80	1.04993	29.29%
Social impact	1 - 5	3.79	1.03330	28.87%
Potential to contribute to local development	1 - 5	3.68	1.08115	24.69%
Good potential market for the product/service offered	1 - 5	3.60	0.93808	15.90%

  

Aspects related to the Entrepreneur	Range	Mean	St. Dev.	Graded 5 in
Entrepreneurial motivation	1 - 5	4.33	0.8806	53.56%
Level of understanding shown by the team proposing the project	1 - 5	4.03	0.9611	38.49%
Social and solidary motivations	1 - 5	3.92	0.9356	29.71%
Knowledge of the technologies assoc. with the product/service	1 - 5	3.72	0.8903	17.57%
Overall personality / Character	1 - 5	3.67	1.1833	29.71%
Knowledge of the business environment (competition, etc.)	1 - 5	3.62	0.8253	12.13%

*Table 2: Importance given to various selection criteria concerning the project and the entrepreneur by micro-angels (1 is least important and 5 is most important).*

An analysis of the possible relationship between the answers provided in our questionnaire and some personal characteristics of the respondents has also been performed. According to the general description of the sample provided in table 1, we have studied whether the grading of the different criteria used by the CIGALES clubs members in the selection process is independent of gender, level of formal education or actual activity status. To be more precise, we have used the Pearson's chi-square test of independence to assess whether the frequency of grading responses to each of the 12 criteria showed in table 2 is independent of each of the three selected categorical variables (gender, formal education, activity status). To report on the obtained results, we have also computed the mean grade value for each criterion in each of the considered sub-samples, and signalled statistically significant differences where appropriate [5]. Table 3 shows the results.

According to the results obtained for the different independence tests performed, neither formal education nor activity status of the CIGALES clubs members significantly affects the responses to most criteria. The only exception for the activity status variable is the "contribution to local development" of a project, a criterion which is significantly more appreciated by active members than by those who have already retired. It also can be observed that, although there is no significant intra differences in the criteria considered, the economic viability of a project is the most highly graded criterion among retired CIGALES members. Similarly, only two criteria concerning the sought characteristics of the entrepreneurs are graded in a statistically significant different way, showing that having a university degree affects the response. Both entrepreneurial motivation and level of understanding between the management team are highly valued by this last group of members, although the differences do not alter the ranking of the different criteria considered.

		Means for each characteristic in the sub-samples considered								
		Gender			Formal education		Activity status			
		(1)	Women	Men	(1)	Sec.ed.	U.degree	(1)	Active	Retired
Aspects of the project										
	Societal and solidarity aspects	**	4.51 †	4.19		4.16	4.34		4.34	4.22
	Economic viability		4.20	4.27		4.18	4.26		4.22	4.31
	Environmental impact	*	4.01	3.68		3.71	3.82		3.89	3.57
	Social impact	**	4.06 ††	3.63		3.61	3.83		3.85	3.61
	Contribution to local development	**	3.97 ††	3.52		3.71	3.67	*	3.79	3.39 †
	Good potential market for the product/service offered		3.72	3.53		3.43	3.64		3.59	3.61
Aspects of the entrepreneur										
	Entrepreneurial motivation		4.37	4.30	**	4.08	4.39		4.33	4.31
	Level of understanding shown by the team proposing the project		4.17	3.94	**	3.84	4.07		4.07	3.91
	Social and solidary motivations	***	4.12 †	3.80		3.80	3.95		3.92	3.90
	Knowledge of the technologies associated with the product/service		3.76	3.69		3.67	3.73		3.70	3.75
	Overall personality / Character	**	3.43	3.80		3.55	3.69		3.61	3.81
	Knowledge of the business environment (competition, etc.)		3.60	3.63		3.69	3.61		3.66	3.52

(1) Pearson's chi-square test of independence reveals significant differences, with p-value < 0.1 (\*), < 0.05 (\*\*) or < 0.01 (\*\*\*)  
Student's t-test comparing the mean of the whole sample and the corresponding sub-sample; p-value < 0.1 (†), < 0.05 (††) or < 0.01 (†††)

*Table 3: Statistical significance of the independence tests and mean values for the selection criteria across different sub-samples*

Statistically significant differences are however encountered in half of the selection criteria when gender is taken into account. Differences are found in all criteria reflecting social and environmental concerns, both related to the projects and to their entrepreneurs. In all these criteria differences have the same sign: on average, women value them more than men. Furthermore, in four out of the five criteria mentioned the mean for the distribution of the women's grading is also found to be statistically significantly different compared to the whole sample [6]. A sixth aspect, the "overall personality" of the entrepreneur is also differently graded by men and women, but in this case the criterion is more appreciated by men.

#### *Monitoring, accompaniment and coaching processes*

Once a project is selected by a CIGALES club, and an agreement is reached, investment in equity is invariably made through a contract between both parties. According to the standard form advised by the CIGALES Federation, the contract would explicitly refer to the percentage of the initial capital of the firm subscribed by the CIGALES club. In accordance with the CIGALES principles, it is strongly recommended that such percentages do not attain the 25% which would be required to constitute a blocking minority in the firm [7].

At the same time, the CIGALES club designates two of their members to "represent" the club in this particular firm. The appointing of sponsors is also made explicit in the contract, their names and addresses inscribed in it, and their role defined as "to serve as intermediaries in the privileged and permanent relationship between the firm and the CIGALES club".

In a brochure edited by one of the regional associations of CIGALES [8], it is claimed that the main advantages of the clubs are that "its funding allows strengthening the equity of the firm without refunds for five years", that they provide "easier access to bank credit and sources of additional funding" and that they add to the "project's credibility, due to the support provided by the [CIGALES club] members, who engage themselves on the economic success of the firm and on the success of the

people who work there”. To see, according to the CIGALES members, which are the main significant actions and decisions to support a given project, several questions were included in the online questionnaire. Table 4 summarizes data concerning the six criteria considered more relevant for the accompaniment process: transfer of human capital and social capital of the CIGALES to the entrepreneur.

Table 4 includes aspects related to the role of the club sponsors, the best way to select those sponsors within the club members, the networking capabilities of the club and its usage, as well as concerning the syndication of clubs. Annual diagnostic analysis, “in order to target and track target on which to work in next years”<sup>9</sup>, is the top graded one, followed by marketing and financing networking capabilities mobilized by the club members. Syndication of different club to invest in a same project is the least appreciated characteristic among those considered in the questionnaire, positioned far away from the others, since most members considers it to be “of little importance”.

	Range	Mean	St. Dev.	Graded 5 in
To agree on an annually diagnostic analysis, made in cooperation between sponsors and managers of the firms	1 - 5	3.99	1.0545	39.1%
To publicize the firm and its products/services mobilizing the resources of the CIGALES	1 - 5	3.45	1.0418	14.6%
To obtain additional funding through channels known by the CIGALES	1 - 5	3.36	1.0867	14.6%
To choose at least one sponsor with prior experience in business management	1 - 5	3.29	1.1629	17.2%
To choose sponsors with good knowledge in the project area	1 - 5	3.25	1.0372	12.9%
That other CIGALES clubs are also investing in the project	1 - 5	2.10	1.0519	2.1%

*Table 4: Importance given to various actions concerning the guiding of the project by micro-angels (1 is least important and 5 is most important).*

We have also analyzed differences in appreciation among groups of members, considering aggregations following the same criteria used before: gender, formal education and activity status. Table 5 provides the results. Quite unlike from the analysis of the selection process, we find here very few statistically significant differences. The most significant one – from the statistical point of view – is the consideration given to the syndication among CIGALES clubs to invest in a project, much less graded by members having university degrees. In opposition, those members put more value in the marketing and financial networking capabilities of the club. Syndication among CIGALES is also less valued by women than by men according to our respondents.

	Means for each characteristic in the sub-samples considered								
	Gender			Formal education			Activity status		
	(1)	Women	Men	(1)	Sec.ed.	U.degree	(1)	Active	Retired
To agree on an annual diagnostic analysis, made in cooperation between sponsors and managers of the firm		4.06	3.95		4.04	3.98	**	3.96	4.08
To publicize the firm and its products/services mobilizing the resources of the CIGALES		3.63	3.36	*	3.13 †	3.54	**	3.55	3.22 †
To obtain additional funding through channels known by the CIGALES		3.40	3.34	*	3.06 †	3.44		3.32	3.49
To choose at least one sponsor with prior experience in business management		3.30	3.28		3.31	3.28		3.21	3.48
To choose sponsors with good knowledge in the project area		3.25	3.25		3.10	3.29	*	3.35	2.98 †
That other CIGALES are also investing in the project	*	1.90	2.21	***	2.67 †††	1.95		2.05	2.22

(1) Pearson's chi-square test of independence reveals significant differences, with p-value < 0.1 (\*), < 0.05 (\*\*) or < 0.01 (\*\*\*)  
Student's t-test comparing the mean of the whole sample and the corresponding sub-sample; p-value < 0.1 (†), < 0.05 (††) or < 0.01 (†††)

*Table 5: Mean values and statistical significance for the accompaniment process across different sub-samples*

#### *Relationship between the decisions in the two processes*

The analysis of the relationships between the above mentioned criteria can also contribute to further understand the decision process made by the micro-angels. The first obvious step in this direction is to compute the correlation matrix of the 18 criteria studied. As shown in Table 6, correlation between almost any pair of variables is low or very low. Nevertheless, moderate correlation is found between two groups of criteria showing interdependence, all concerning the selection process. One of the groups link the criteria related the double bottom line of the social micro-angels, namely between the “societal and solidarity aspects” of the project, its “environmental impact”, its “social impact” and the “social and solidarity motivations” of the entrepreneur, evidencing that frequently the *cigaliers* grade them similarly. An analogous correlation is found between the “economic viability” of the project, the “good potential market for the product or service offered” and the “entrepreneurial motivation” of the entrepreneurs, three criteria linked to the financial performance of the project that are often graded similarly by the micro-angels. Finally, the grading answers to the two questions related to the desirable characteristics of the sponsors for a given project (“sponsors with prior experience in business management” and “sponsors with good knowledge in the project area”) also show a moderate correlation.

	Selection process																	
	Aspects related to the Project							Aspects related to the Entrepreneur							Accompaniment process			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	
(1)	Societal and solidarity aspects																	
(2)	0,036	1																
(3)	<b>0,389</b>	-0,177	1															
(4)	<b>0,431</b>	-0,113	<b>0,442</b>	1														
(5)	0,215	-0,105	0,156	0,047	1													
(6)	-0,129	0,280	-0,203	-0,072	0,040	1												
(7)	-0,022	<b>0,371</b>	-0,105	-0,081	-0,069	<b>0,356</b>	1											
(8)	0,109	0,067	0,189	0,129	0,100	0,057	0,141	1										
(9)	<b>0,589</b>	-0,020	<b>0,381</b>	<b>0,439</b>	0,196	-0,134	-0,097	0,080	1									
(10)	0,003	0,149	-0,112	0,003	-0,095	0,019	0,108	-0,012	-0,031	1								
(11)	0,013	0,055	0,015	0,049	-0,137	0,130	0,197	0,150	-0,058	0,032	1							
(12)	-0,011	0,084	0,061	0,044	0,056	0,205	0,115	-0,039	-0,032	0,108	0,101	1						
(13)	-0,073	0,082	-0,029	0,057	-0,115	0,079	0,257	0,110	-0,045	0,123	0,005	0,142	1					
(14)	0,088	-0,095	0,121	0,044	0,044	0,034	-0,004	0,118	-0,048	0,031	0,105	0,039	-0,110	1				
(15)	0,047	-0,047	0,056	0,085	-0,020	0,010	0,035	0,122	-0,015	0,081	0,236	0,024	-0,016	0,264	1			
(16)	0,105	0,222	-0,018	0,015	0,032	0,067	0,151	0,059	0,089	-0,008	0,089	0,075	-0,058	-0,162	-0,063	1		
(17)	-0,041	-0,049	0,047	-0,027	-0,010	-0,047	-0,015	-0,024	-0,020	0,135	0,094	-0,009	-0,136	-0,021	-0,154	<b>0,316</b>	1	
(18)	-0,048	-0,058	-0,058	0,028	0,074	0,044	-0,082	-0,045	-0,028	-0,115	0,015	0,108	0,051	-0,100	-0,017	-0,044	-0,145	1

Table 6: Correlation matrix for the 18 criteria considered in the selection and accompaniment processes

Since the above correlation matrix does not provide much information regarding the accompaniment processes, we apply ordinal logistic regressions to study the factors influencing the grading of each of the decisions in this second stage. As independent variables both personal characteristics of the respondents and their answers grading the decisions to adopt during the selection process are used. The three predictors for personal characteristics, all binary variables, are gender (equal to 1 for women), level of formal education (=1 for those micro-angels holding a University degree) and activity status (=1 for retired micro-angels). Twelve variables are used as predictors for the preferences of the micro-angels during the selection process, one for each of the twelve questions considered in this stage. Ordinal regression is selected because the values of the dependent variables in each model can be trivially ordered in categories (from less preferred/important to most preferred/important). Results of regressions can be found in Table 7.

It follows from the examination of Table 7 that the decision making in the accompaniment process depend both on some personal characteristics of the micro-angels and on their preferences among the criteria used in the selection process. As a whole, 75% of such criteria are statistically significant predictors, each one linked to a given accompaniment decision, most of them in a positive way.

For the criterion to “agree on an annual diagnostic analysis of the firm” (model 1), three predictors are statistically significant: the social impact of the project under consideration, the entrepreneurial motivation showed by the entrepreneur and his/her knowledge of the business environment of the project. The predicted effect is as follows: for a one unit increase in the grading of the “social impact of the project”, we expect (in a log odds scale) a 0.3169 increase in the grading of the importance of this decision; or, alternatively, for a one unit increase in the grading of the “social impact of the project”, the odds of having a *cigalier* grading the "annual diagnostic analysis of the firm" in the higher values of the scale is 1.37 times greater, all other variables of the model held constant. Similarly, for one unit increase in the grading of the "entrepreneurial motivation", the odds of having a *cigalier* grading the "agreement on an annual diagnostic analysis of the firm" in the higher values of the scale is 1.85 times greater, all other variables of the model held constant. For the knowledge of the business environment, the odds rate is 1.34.

The grading of the importance of publicizing the firm and its products/services mobilizing the resources of the micro-angels, model 2, has four predictors statistically significant. With the increase in formal education (from secondary school to holding a University degree) the odds of having a *cigalier* grading the importance to the publicity aspect of the accompaniment process in the higher values of the grading scale is almost double (1.97 times greater), all other variables of the model held constant. Gender is also significant, since the odds of a *cigalier* grading this criterion in the higher values of the grading scale is 1.68 times greater when the respondent is a woman. The increment in the grading in the societal and solidarity aspects of the project also increments the odds of a higher grading of the publicizing criterion (odds ratio 1.46); whereas the increment of the grading in the social and solidarity motivations of the entrepreneur diminishes the odds of having the *cigalier* grading the publicising variable in the higher values of the Likert scale (odds ratio 0.64).



	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	annual diagnostic analysis of the firm			publicize firm and products through the micro-angels			to obtain additional funding through the micro-angels			choose sponsor(s) with prior experience in business mgmt			choose sponsors with good knowledge in the project area			other micro-angels clubs also investing in the project		
Independent variables	regress coef.	odds ratios		regress coef.	odds ratios		regress coef.	odds ratios		regress coef.	odds ratios		regress coef.	odds ratios		regress coef.	odds ratios	
Gender	0.2377			0.5194	1.68 *		0.2082			-0.0101			0.0703			-0.7279	0.48 **	
Level of formal education	-0.1218			0.6800	1.97 **		0.6770	1.97 **		-0.1091			0.1422			-1.2577	0.28 ***	
Activity status	0.2331			-0.4267			0.5372	1.71 *		0.4976	1.64 *		-0.6899	0.50 **		0.0848		
Societal and solidarity aspects	-0.2030			0.3816	1.46 **		0.0941			0.1455			-0.1043			-0.0485		
Economic viability	-0.0771			-0.1908			-0.1379			0.4568	1.58 **		-0.0774			-0.1274		
Environmental impact	-0.1103			0.1884			0.0474			-0.0702			0.1628			-0.1690		
Social impact	0.3169	1.37 **		-0.0558			0.0766			-0.0052			-0.1407			0.2052		
Potential to contribute to local development	-0.2000			0.0260			0.0434			0.0761			0.0018			0.2413	1.27 **	
Good potential market for the product offered	-0.0452			0.1033			-0.0091			-0.0849			-0.0095			0.1212		
Entrepreneurial motivation	0.6098	1.84 ***		-0.1169			-0.0717			0.1782			-0.0481			-0.0906		
Level of understanding shown by the team	0.2115			0.0589			0.1627			0.0617			-0.1221			-0.0074		
Social and solidary motivations	0.0455			-0.4414	0.64 **		-0.1659			0.1393			-0.0044			-0.0040		
Knowledge of the tech. assoc. with the product	0.1788			0.0724			0.1474			-0.1147			0.3327	1.39 **		-0.2392		
Overall personality / Character	-0.1743			0.1565			0.3326	1.39 **		0.0940			0.1741			0.0544		
Knowledge of the business environment	0.2935	1.34 *		0.0193			0.0110			0.1413			-0.1255			0.2462		

Statistical significance: \* p-value < 0.1 ; \*\* <0.05; \*\*\*< 0.01

Table 7: Results of the ordinal logistic regressions



Similarly, we can see that obtaining additional funding for the firm through channels known by the micro-angels (model 3) can be predicted through both level of formal education and activity status of the micro-angel, and also through the importance accorded to the assessment of the overall personality of the entrepreneur. Both holders of university degrees and retired club members favour this criterion.

The way sponsors are chosen within the club members (models 4 and 5) is also dependent on the activity status of the club members. Retired members prefer sponsors with prior experience in business management, while active members favour criteria related to good knowledge in the project area. The preference for the former can also be related to club-members valuing economic viability (odds ratio 1.58). Finally, syndication among CIGALES clubs (model 6) is strongly favoured by men (odds ratio  $1/0.48=2.07$ ) and members with secondary education (odds ratio 3.52), as well as for those micro-angels grading the local development potential of a project in the high values of the Likert scale.

## 5. Discussion and final remarks

We can see that micro-angels profile is quite diverse. There are assorted groups of professionals participating in angel investing, from senior managers and middle managers to even a few artisans. Furthermore, these social profiles include far more women than regular business angels, since they are present in the work force but not yet well represented at the top of enterprises, from where spring business angels (Ramadani, 2009). Our analysis also shows that women have a primary role in “enforcing” the double bottom line of the CIGALES clubs during the project selection process.

Concerning the decision making during the selection of projects, it must be noted that instead of looking for technologies or markets, the microangels of the CIGALES are interested in small, socially or environmentally friendly projects. We can also elaborate, based on our findings in table 2, that the entrepreneur being searched is a normal entrepreneur similar to that searched by Business Angels in general, but the project for the microangels should be social.

This social orientation of the Cigaliers also comes out in the kind of entrepreneur that they are looking for if we consider some of the criteria which are not well graded: both the level of formal education of the entrepreneur and the previous experience were proposed and considered “of little importance” by the respondents. One participant in the workshop further enlightens both social and economic criteria taken into account by the micro-angels:

*“At the level of entrepreneurs we ask that the project developer has some (prior) training in entrepreneurship. [Furthermore] the business project must be constructed, established and followed by an organization. It can be a “boutique de gestion”, an association promoting solidarity economy (pôle d’économie solidaire), a chamber of commerce that prepares the project (with the market research, etc ...). For example the entrepreneur can be someone who was unemployed before, and who wants to start a business. After the training, we can talk more easily of the financial aspects of the business, because he will understand certain mechanisms in the functioning of the firm. It is important to us, because the chief manager will feel the isolation of the entrepreneur.” (RT #1)*

Reinforcing the previous conclusions, our results also show that there are two groups of criteria similarly considered by the micro-angels during this selection process. One group is related to the financial performance of the firm or project, whereas the other concerns the social and environmental dimensions of the projects. In both cases criteria related to the project and at least one related to the entrepreneur are taken into account.

Once one business project is selected, we can see a coincidence with the research results on Business Angels in the main aspects of the monitoring and coaching process of the CIGALES clubs. Micro-angels use their human capital to provide skills, expertise and advise, and put forward their networking contacts whenever necessary. As one interviewee put it:

*“Because we want the business to grow, we do not just give money. We provide very specific advice, such as inventory management. That also means that we will get involved in anything related to marketing and communication, for there to be more customers. We will bring an additional dynamism [to the firm].” (Int. #2)*

The analysis of the relationship between the preferences of the club members during the accompaniment process and those exhibited for the selection process also show relatively low interdependence. We might highlight – being the less obvious – that preference for using the networking capabilities of the clubs is associated with high valuing the social aspects of the projects in the case of publicizing the firms, but to the overall character of the entrepreneur in the case of additional funding.

Quite differently from the results obtained for the selection process, the activity status seems to make a difference with respect to many aspects of the monitoring and coaching processes. To explain such a difference, during the workshop it was mentioned – and subsequently confirmed by the CIGALES club member – that it is more likely for a retired person to serve as sponsor of a business project, since he/she has more “free” time to allocate in the tasks involved in these processes. This would then be reflected in a difference in grading some of the aspects, and particularly to the weight given to an annual diagnostic analysis of the firm, a fundamental tool to the coaching for any sponsor.

It is also worth to note that although a CIGALES can be an example of Business Angels syndication in itself, syndication among CIGALES clubs appears not to be relevant to most *cigaliers*. This can be explained by the sparseness of the clubs across most regions of France. Given their commitment to invest locally, such form of syndication is not possible for many of the clubs.

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<sup>1</sup> Data published in the Website of the National Federation of CIGALES (<http://www.cigales.asso.fr/>, accessed April 2012).

<sup>2</sup> Cfr. *Guide Pratique à destination des futurs cigaliers*, on the website of the Nord Pas-de-Calais regional association (<http://www.cigales-npdc.org>).

<sup>3</sup> Calculated by the authors, based on data provided in the websites of the Nord Pas-de-Calais and Bretagne regional associations (<http://www.cigales-npdc.org>; <http://www.cigales-bretagne.org>).

<sup>4</sup> Cfr. *Choisir un projet, une affaire de confiance et d'expertise*, part of the internal dossier compiled to guide the development of a CIGALES club.

<sup>5</sup> Note that the means of two sub-samples can be significantly similar even though the frequency of the diverse grading responses to a given question presents a significantly dissimilar distribution among the sub-samples. That is, Pearson's chi-square test can tell us that the responses to a given question are affected by the respondent's (e.g.) gender, and yet the calculated mean for the women's and men's sub-samples can be similar, because the different answers actually compensate each other. Even so, we have used the Student's t-test to see if the difference in means between the two sub-samples and between each sub-sample and the whole sample are significant.

<sup>6</sup> Such statistically significant difference in means is not found for the distribution of the men's grading, most probably because men constitute the majority of the sample.

<sup>7</sup> The internal document *Formaliser les droits et devoirs respectifs des partenaires*, part of the dossier compiled to guide the development of a CIGALES club, further justifies this option, since "it is not the vocation of CIGALES to actively participate in the management of the firm".

<sup>8</sup> Cfr. *Guide Pratique à destination des futurs cigaliers*, on the website of the Nord Pas-de-Calais regional association (<http://www.cigales-npdc.org>).

<sup>9</sup> Wording translated from the French contract sample already mentioned before.

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